

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-26. (Canceled)

27. (Currently Amended) A resonator comprising:

a spring-mass mechanism having an effective mechanical stiffness, an effective mechanical mass, and a geometry that defines the effective mechanical stiffness and mass;

wherein the geometry includes at least one of a void and a plurality of indentations dimensioned to expose a first portion of the spring-mass mechanism by a predetermined amount that is greater than a predetermined amount by which a remaining portion of the spring-mass mechanism is exposed in a fabrication process that removes material from the spring-mass mechanism, such that that a change in at least one of the effective mechanical stiffness and the effective mechanical mass produced in the first portion offsets a change in at least one of the effective mechanical stiffness and the effective mechanical mass produced in the remaining portion, thereby providing a predetermined ratio between the effective mechanical stiffness and the effective mechanical mass upon completion ~~is defined by application of the [[a]] fabrication process to a constituent material, and wherein the geometry is such that one or more variations of the fabrication process to the constituent material results in little change to a ratio of the effective mechanical stiffness to the effective mechanical mass.~~

28. (Currently Amended) The resonator of claim 27 wherein the ~~geometry of the spring-mass mechanism comprises one or more voids~~ void is formed in a length of the spring-mass mechanism.

29. (Currently Amended) The resonator of claim 27 wherein the geometry of the spring-mass mechanism comprises an outer edge having [[a]] the plurality of indentations, the plurality of indentations having the effect of increasing a surface area of the outer edge, which ~~that~~ is exposed to the fabrication process.

30. (Previously Presented) The resonator of claim 27 wherein the spring-mass mechanism includes at least one mass structure that is formed integral to the spring-mass mechanism.

31. (Currently Amended) The resonator of claim 30 wherein the void is formed in a body of at least one of the mass structures ~~comprises one or more voids formed in a body of the at least one mass structure.~~

32. (Currently Amended) The resonator of claim 30 wherein at least one of the mass structures comprises an outer edge having [[a]] the plurality of indentations, the plurality of indentations having the effect of increasing a surface area of the outer edge, which ~~that~~ is exposed to the fabrication process.

33. (Currently Amended) The resonator of claim 32 wherein the at least one of the mass structures further comprises ~~one or more voids formed respectively~~ the void, which is formed in a body of the at least one of the mass structure.

34. (Previously Presented) The resonator of claim 27 wherein the spring-mass mechanism includes a plurality of mass structures that are formed integral to the spring-mass mechanism.

35. (Currently Amended) The resonator of claim 34 wherein at least one of the plurality of mass structures includes ~~one or more voids~~ the void, which is formed in a body of the mass structure.

36. (Currently Amended) The resonator of claim 34 wherein at least one of the plurality of mass structures includes an outer edge having [[a]] the plurality of indentations, ~~wherein~~ the plurality of indentations having the effect of increasing a surface area of the outer edge, which ~~that~~ is exposed to the fabrication process.

37. (Currently Amended) The resonator of claim 36 wherein at least one of the plurality of mass structures further includes ~~one or more voids~~ the void, which is formed in a body of the mass structure.

38. (Previously Presented) The resonator of claim 27 wherein the spring-mass mechanism includes a plurality of spring structures that are formed integral to the spring-mass mechanism.

39. (Currently Amended) The resonator of claim 38 wherein at least one of the plurality of spring structures includes ~~one or more voids~~ the void, which is formed in a body of the spring structure.

40. (Currently Amended) The resonator of claim 38 wherein at least one of the plurality of spring structures includes an outer edge having [[a]] the plurality of indentations, ~~and wherein~~ the plurality of indentations having the effect of increasing a surface area of the outer edge, which ~~that~~ is exposed to the fabrication process.

41. (Currently Amended) The resonator of claim 27 wherein ~~the geometry of the spring-mass mechanism comprises:~~

~~one or more voids~~ the void is formed in a length of the spring-mass mechanism; and ~~an outer edge having a~~ the plurality of indentations forms an outer edge, the plurality of indentations having the effect of increasing a surface area of the outer edge, which ~~that~~ is exposed to the fabrication process.

42. (Previously Presented) The resonator of claim 41 wherein the spring-mass mechanism includes at least one mass structure that is formed integral to the spring-mass mechanism.

43. (Currently Amended) The resonator of claim 42 wherein at least one of the mass structures ~~comprises one or more voids~~ includes the void, which is formed in a body thereof.

44. (Currently Amended) The resonator of claim 42 wherein at least one of the mass structures comprises an outer edge having [[a]] the plurality of indentations, the plurality of indentations having the effect of increasing a surface area of the outer edge, which ~~that~~ is exposed to the fabrication process.

45. (Currently Amended) The resonator of claim 44 wherein the at least one of the mass structures further ~~comprises one or more voids~~ includes the void, which is formed in a body of the at least one of the mass structure.

46. (New) The resonator of claim 27, wherein:
the spring-mass mechanism includes a spring beam and a mass formed by a plurality of stacked beams;

a width of the spring is greater than a width of each of the stacked beams; and
the void is formed by an interconnection of at least two of the stacked beams.

47. (New) The resonator of claim 27, wherein the dimensions of the at least one of the void and the plurality of indentations are calculated as a function of a difference between an initial design width and an expected deviation from the initial design width resulting from the fabrication process.